

Atty Dkt. No.: CLON-056US2
USSN: 10/762,588

REMARKS

The Applicants respectfully request reconsideration of the application in view of the remarks made herein.

Claims 17 and 22 have been canceled. Claims 11 and 18 have been amended in the present response such that the claimed kits further include a recombinant vector comprising a nucleotide sequence encoding a metal ion affinity peptide and a restriction endonuclease recognition sequence for inserting a heterologous nucleic acid molecule encoding a fusion partner protein for the metal ion affinity peptide. Support for this amendment can be found in the specification on page 29, paragraph [00111] and page 36, paragraph [00139]. Claims 23 and 24 have been added and specify that the metal ion affinity peptide of Claims 11 and 18, respectively, comprises SEQ ID NO:1. Support for these claims can be found in the specification on pages 24 and 25, paragraph [0092].

Because these amendments add no new matter, entry thereof by the Examiner is respectfully requested.

Rejection under 35 U.S.C. § 102

Claims 11-13, 16 and 17 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Porath et al. (Biochemistry 22:1621-1630 (1983)).

As stated in MPEP §2131:

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987), cert. denied, 481 U.S. 1052 (1987). See also, Scripps Clinic and Research Foundation v. Genentech, Inc., 18 USPQ 2d 1001 (Fed. Cir. 1991). (*emphasis added*)

As indicated above, the amended claims of the present application are directed to a kit for purifying a protein comprising (1) a first composition comprising a first metal ion chelate resin comprising a first immobilized metal ion, (2) a second composition comprising a second metal ion chelate resin comprising a second immobilized metal ion, and (3) a recombinant vector comprising a nucleotide sequence encoding a metal

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ion affinity peptide and at least one restriction endonuclease recognition sequence for inserting a heterologous nucleic acid molecule encoding a fusion partner protein for the metal ion affinity peptide. As such, the three elements are provided in a single kit for purifying a protein.

Porath et al. discloses differential affinity of naturally occurring serum proteins to gel-immobilized iron or gel immobilized nickel ions. Porath et al. is not drawn to the purification of recombinant proteins comprising a metal ion affinity tag. As such, Porath et al. fails to teach or disclose a recombinant vector comprising a nucleotide sequence encoding a metal ion affinity peptide and a restriction endonuclease recognition sequence for inserting a heterologous nucleic acid molecule encoding a fusion partner protein for the metal ion affinity peptide. Furthermore, Porath et al. fails to teach or disclose a kit for purifying any protein, let alone one comprising two distinct metal ion affinity columns and a recombinant vector as claimed in the present application.

With regard to New claim 23, that Applicants submit that this claim is further distinguished over Porath et al. in that it claims a specific metal ion affinity peptide (i.e., comprising SEQ ID NO:1) encoded by the recombinant vector provided in the claimed kit.

Because Porath et al. does not teach each and every element as set forth in the claims, this reference fails to anticipate the claimed invention. As such, the Applicants respectfully request that this rejection be withdrawn.

Rejection under 35 U.S.C. § 103

Claims 18-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Porath et al. in view of Nelson et al. (US 5,962,641).

As discussed above, Porath et al. fails to teach or suggest a kit for purifying a protein comprising comprising two distinct metal ion affinity columns and a recombinant vector as claimed in the present application. As Nelson is cited merely for its asserted

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teaching of using Co(2+) in a matrix for protein purification, this reference fails to remedy the deficiency in Porath et al.

With regard to New claim 24, the Applicants submit that this claim is further distinguished over Porath et al. in view of Nelson et al. in that it claims a specific metal ion affinity peptide (i.e., comprising SEQ ID NO:1) encoded by recombinant vector provided in the claimed kit.

As such, the Applicants respectfully request withdrawal of this rejection.

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CONCLUSION

The Applicants submit that all of the claims are in condition for allowance, which action is requested. If the Examiner finds that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

The Commissioner is hereby authorized to charge any underpayment of fees associated with this communication, including any necessary fees for extensions of time, or credit any overpayment to Deposit Account No. 50-0815.

Respectfully submitted,
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